

## ITS PROJECT APPLICATION FORM FY 2009-2013 TIP

**General Instructions:** This form is to be used to request federal Congestion Mitigation and Air Quality (CMAQ) funding available through the Maricopa Association of Governments for Intelligent Transportation System (ITS) projects to be included in the FY 2009-2013 MAG Transportation Improvement Program. Currently funding is available only for **FY 2013**.

Separate application forms are available for bicycle, pedestrian, air quality, and transit projects. Freeway, street and rail transit projects will be programmed in a separate process.

This application form includes:

- Part A: Project Description and TIP Listing Information. In Part A, the applicant provides the minimum information necessary to list a project in the TIP as required by applicable federal regulations and general descriptive information necessary for MAG staff and technical committees to evaluate the project.
- Part B: Project Congestion Management System (CMS) and Congestion Mitigation Air Quality (CMAQ) Data: In Part B, the applicant provides data necessary for MAG staff to calculate CMS and CMAQ scores for projects.
- Part C: MAG Technical Committee Additional Information. This section is used to collect information requested by the MAG ITS Committee. The MAG ITS Committee is charged with evaluating and recommending ITS projects for federal funding. **PLEASE NOTE: Part C is only available electronically.** It is available at: <http://www.mag.maricopa.gov/project.cms?item=413>, or you can contact Leo Luo: [lluo@mag.maricopa.gov](mailto:lluo@mag.maricopa.gov), and he will send you the electronic file.

**Deadlines and Transmittal Instructions:** All sections should be completed and returned to MAG Offices by **5:00 p.m. September 7, 2007**. Please e-mail Judy Tadlock at MAG, [jtadlock@mag.maricopa.gov](mailto:jtadlock@mag.maricopa.gov) this application (Part A & B). Part C is only available electronically as noted above. Please e-mail Leo Luo the completed Part C, excel file to [lluo@mag.maricopa.gov](mailto:lluo@mag.maricopa.gov). The mailing address and FAX number for the MAG offices is:

ATTN: Judy Tadlock  
Maricopa Association of Governments  
302 North 1<sup>st</sup> Avenue, Suite 300  
Phoenix, Arizona 85003  
FAX Number: (602) 254-6490

**Electronic Download Information:** A downloadable version of these forms in Microsoft Word is available on the MAG website at <http://www.mag.maricopa.gov/project.cms?item=413>. If requested, MAG staff will also provide these forms via e-mail or FAX.

**MAG Contact Information:** If you have any questions, please contact Stephen Tate or Eileen Yazzie at (602) 254-6300 or at [state@mag.maricopa.gov](mailto:state@mag.maricopa.gov).

**Agency Contact Information:** Please complete the following contact information for each project, so that we may contact you should we need additional information.

1. Name of the Agency Contact for the Project Request:  <b>Avery Rhodes</b>	2. Telephone:  <b>623-847-1162</b>
3. E-mail  <a href="mailto:arhodes@glendaleaz.com">arhodes@glendaleaz.com</a>	4. Date:  <b>9/10/2007</b>

## ITS PROJECT APPLICATION FORM – FY 2009-2013 TIP

### Part A: Project TIP Listing Information and Description

#### Section One: TIP Listing Information.

Please complete the following information for all projects. If the project is accepted for MAG federal funding, the project information provided in this section will appear in the TIP as provided by the applicant

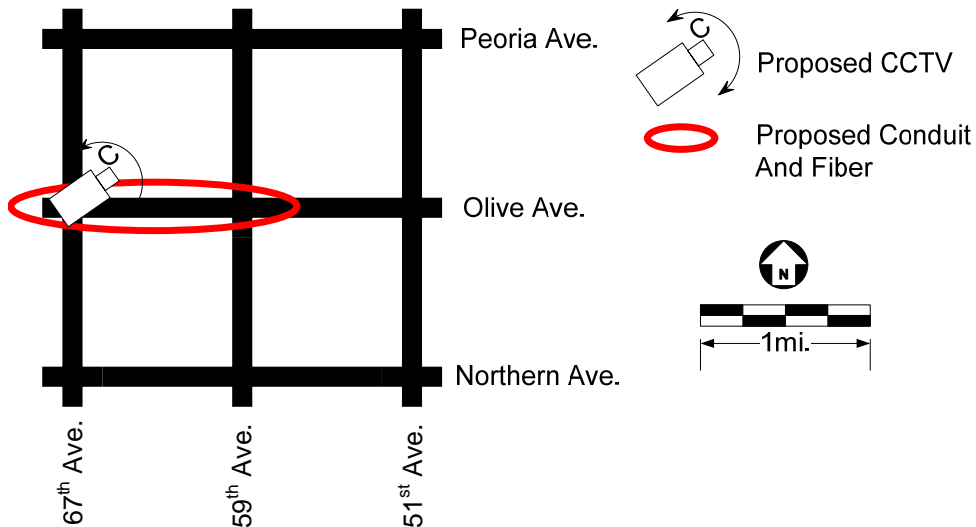
1. Sponsoring Agency Name:  <b>City of Glendale</b>	2. Year (Please check box):  <input checked="" type="checkbox"/> FY <del>2009</del>
3. Project Location (The project limits if applicable):  <b>Olive Ave.: 67<sup>th</sup> Ave. to 59<sup>th</sup> Ave.</b>	
4. Type of Work (Description of the work to be performed):  <b>ITS Fiber and 1 CCTV Camera</b>	
5. Amount of Federal Funds Requested (This amount cannot exceed <b>70.0</b> percent of the total cost of the project.):  <b>\$372,149</b>	6. Type of Federal Funds Requested (Please check box.):  <input type="checkbox"/> MAG STP <input checked="" type="checkbox"/> CMAQ
7. Amount of Local Funds to be Used (This amount cannot be less than <b>30.0</b> percent of the total cost of the project.):  <b>\$159,493</b>	8. Type of Local Funds to be Used: (Please check <u>only one</u> box.):  <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> HURF   <input type="checkbox"/> General Fund   <input checked="" type="checkbox"/> Sales Tax   <input type="checkbox"/> Property Tax </div> <div> <input type="checkbox"/> Impact Fees   <input type="checkbox"/> Bond Proceeds   <input type="checkbox"/> Private   <input type="checkbox"/> Other, Please specify: _____ </div> </div>
9. Total Cost of the Project: (This amount must equal the sum of the federal and local amounts requested):  <b>\$531,642</b>	

Deleted: 2013

## ITS PROJECT APPLICATION FORM – FY 2009-2013 TIP

### Part A: Project TIP Listing Information and Description

10. Please attach a map, drawing, photograph, plans or other graphic showing the location of the project. If no graphic is available or it is not feasible to provide one, please indicate this fact in the space below.



## ITS PROJECT APPLICATION FORM – FY 2009-2013 TIP

### Part B: CMS and CMAQ Data

**General Instructions:** In Part B, the applicant provides data necessary for MAG staff to calculate Congestion Management System (CMS) and CMAQ scores for projects.

#### Section One: Congestion Management System and CMAQ Data

Please complete the following information for all street projects. The information used in this section is used to calculate CMS scores.

# ITS PROJECT APPLICATION FORM – FY 2009-2013 TIP

## Part B: CMS and CMAQ Data

1. Current Average Daily Traffic (ADT) on the Facility or the Nearest Parallel Facility of a Similar Type:  <b>34,125</b>	2. Name of the Roadway Section Used for the ADT Estimate:  <b>Olive Ave.</b>	3. Type of Facility to be Improved (Check only <u>one</u> box):  <input type="checkbox"/> Arterial > 4 legs (e.g. Grand) <input checked="" type="checkbox"/> Arterial Street <input type="checkbox"/> Collector Street <input type="checkbox"/> Other
4. Number of <b>Through</b> Lanes Currently on the Facility Prior to Project Completion (Do <u>not</u> include right, left or center turn lanes):  <b>5</b>	5. Number of <b>Through</b> Lanes on the Facility After the Project is Completed (Do <u>not</u> include auxiliary lanes):  <b>5</b>	6. Length of the Facility (in miles):  <b>1.0</b>
7. Township Coordinate of the Midpoint of the Facility: <b>3N</b>	8. Range Coordinate of the Midpoint of the Facility: <b>2E</b>	9. Section Coordinate of the Midpoint of the Facility: <b>30</b>

Deleted: 29

10. If the project improves traffic signal coordination, please do the following:

a. Enter the pre-improvement (current) traffic speed of the traffic corridor: **35**

b. In the Table Check the Box in The Row That Best Describes the Project (Check Only One Box):

Before (Pre-Improvement) Condition	After (Post Improvement) Condition	Expected Increase In Speed
<input type="checkbox"/> Non-interconnected, pre-timed signals with old timing plan	Advanced computer-based control	25.0 percent
<input type="checkbox"/> Interconnected, pre-timed signals with old timing plan	Advanced computer-based control	17.5 percent
<input checked="" type="checkbox"/> Non-interconnected signals with traffic-actuated controllers	Advanced computer-based control	16.0 percent
<input type="checkbox"/> Interconnected, pre-timed signals with actively managed timing	Advanced computer-based control	8.0 percent
<input type="checkbox"/> Interconnected, pre-timed signals with various forms of master control and various qualities of timing plans	Optimization of signal timing plans. No change in hardware	12.0 percent
<input type="checkbox"/> Non-interconnected, pre-timed signals with old timing plan	Optimization of Signal Timing Plans	7.5 percent

Deleted: 40

11. Other Project Information: (Check as many as are applicable):

☒ Includes Traffic Signal Improvements for a Single Agency  
☐ Includes Traffic Signal Improvements that Apply to More than One Agency  
☐ Includes FMS Improvements  
☒ The Project Conforms to Local Land Use Plans  
☐ The facility is on the adopted MAG Roads of Regional Significance Network  
☐ Adds Traffic Signals that increase pedestrian crossing time for seniors

**ITS PROJECT APPLICATION FORM – FY 2009-2013 TIP**  
**Part B: CMS and CMAQ Data**

12 Management System (Please check only one box)

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Congestion Management System (CMS)  | <input type="checkbox"/> Safety Management System (SMS)     |
| <input type="checkbox"/> Bridge Management System (BMS)                 | <input type="checkbox"/> Intermodal Management System (IMS) |
| <input type="checkbox"/> Pavement Management System (PMS)               | <input type="checkbox"/> Other                              |
| <input type="checkbox"/> Public Transportation Management System (PTMS) |   |

13. Please identify the priority the agency places on this project. If for example, the agency is submitting three requests for ITS projects and this is the agency's highest priority, then a "1" should be entered. Each priority entered should be unique – e.g. no two requests for ITS projects should have the same priority.

1

**Part C: MAG Technical Committee Additional Information**

This section is used to collect information requested by the MAG ITS Committee. The MAG ITS Committee is charged with evaluating and recommending ITS projects for federal funding. **Part C is only available electronically. It is available at: <http://www.mag.maricopa.gov/project.cms?item=413>, or you can contact Leo Luo: [lluo@mag.maricopa.gov](mailto:lluo@mag.maricopa.gov), and he will send you the electronic file.**

**Contact Information**

Please contact Sarath Joshua or Leo Luo at (602) 254-6300 or [sjoshua@mag.maricopa.gov](mailto:sjoshua@mag.maricopa.gov), [lluo@mag.maricopa.gov](mailto:lluo@mag.maricopa.gov) for additional information or questions.

**FY 2009 - 2013 TIP - Programming 2013  
MAG ITS Project Data Form**

Please enter project data **ONLY** in highlighted cells, save the file with the lead agency name in it - ie. Mesa ITS Projects.xls

Submit this Excel workbook to MAG via email to: [LLUO@MAG.MARICOPA.GOV](mailto:LLUO@MAG.MARICOPA.GOV)

Please use one worksheet per project, with the tab at the bottom indicating agency priority

Links to various websites are provided for additional information and help

The worksheet titled "Example" shows an example on how to enter Data in the highlighted areas. If errors are detected alerts will pop-up in **red text**.

The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

*Please enter required information in highlighted cells*

**A. Project Title & Sponsor**

Lead Agency	City of Glendale
Other Partnering Agencies	
ITS Project Title:	Olive Ave. Fiber: 59th Ave. to 67th Ave.

**B. Project Goals & Objectives**

**Project Goals:**

This goal of this project is to greatly improve the City's ability to manage commuter traffic traveling through the city to and from work by having a view of traffic conditions and control of traffic signals on adjacent arterials. Specifically, one mile of fiber optic cable and conduit will be installed to communicate with four currently non-interconnected signalized intersections on Olive Ave. between 59th Avenue and 67th Avenue. Additionally, a closed circuit television (CCTV) camera will be installed at 67th Ave. and Olive Ave. Finally, the fiber will be able to serve the future Regional Community Network (RCN) that is planning to communicate on fiber along this route.

**Objectives:**

Connect four signals to the City of Glendale central signal system. Accommodate planned Regional Community Network (RCN) that is planned in this area. Improve monitoring capabilities to a major arterial-arterial intersection. Olive Ave. is one of the most important and busiest east-west arterials in the west valley because it has bridges over Grand Ave., New River and the Agua Fria River. The objective of this project is to relieve the peak travel periods through quicker staff response times and improved traffic management and traveler information capabilities.

### C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

<b><u>SELECT ITS Subsystems:</u></b> <a href="http://www.iteris.com/itsarch/html/entity/pae">http://www.iteris.com/itsarch/html/entity/pae</a>		Yes or No	
Center Subsystem	Yes		
Traveler Subsystem	No		
Field/Roadside Subsystem	Yes		
Vehicle Subsystem	No		
Communications Subsystem	No		

**Architecture Flows** (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Center	Field	signal timing
Field	Center	signal status
Field	Center	video images
Center	Field	camera control

**Communications:** Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
City of Glendale	AZTech	Traffic Signal & CCTV	Fiber/RCN	No	Oct-2008	

<u>Arterial ITS applications</u>	Relevant Applications (ENTER: Yes or No)	<u>Applicable ITS User Services Addressed</u> <a href="http://www.iteris.com/itsarch/html/user/userserv.htm">http://www.iteris.com/itsarch/html/user/userserv.htm</a>	<u>Applicable ITS Market Packages</u> <a href="http://www.iteris.com/itsarch/html/mp/mpindex.htm">http://www.iteris.com/itsarch/html/mp/mpindex.htm</a>
1. Traffic Management	Yes	1.6	ATMS01, 03, 07, 21
2. Transit Operations Support	No		
3. Interagency Data Sharing and Control	Yes	1.6, 7.1	ATMS01, 03, 07, 21
4. Integrated Traveler Information	No		
5. Archived Data Management	Yes	7.1	ATMS03, 07, 21
6. Incident Management	Yes	1.7	ATMS08, 21
7. Freeway-Arterial	No		

#### D. Project Budget

- (1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed \$1 million per program year per agency.
- (2) Joint projects that involve 3 or more agencies may exceed \$1m in federal cost. Federal cost of each agency's component will not be counted against the \$1m limit.
- (3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match
- (4) For multijurisdictional projects, the federal and local shares of each partnering agency must be shown below.

	<b>Federal Cost</b>	<b>Local Match (min 30%)</b>	<b>Total Cost</b>
<b>Lead Agency</b>	\$372,149.42	\$159,492.61	<b>\$531,642.03</b>
<b>Partnering Agency#1</b>			<b>\$0.00</b>
<b>Partnering Agency#2</b>			<b>\$0.00</b>
<b>Partnering Agency#3</b>			<b>\$0.00</b>
<b>Total</b>	\$372,149.42	\$159,492.61	\$531,642.03
<b>Cost percentage</b>	<b>70.0%</b>	<b>30.0%</b>	

Note: Each participating agency should provide at least 30% local match for its share of the total cost

#### E. Project Schedule



The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time to Milestone (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Feb-2008
Receipt of ADOT project number	Apr-2008	Yes	2	Apr-2008
Initial DCR	May-2008	No	0	NA
Final DCR	Jun-2008	Yes	3	May-2008
30% Preliminary Plans, Cost Estimate and Report	Aug-2008	No	0	NA
60% Preliminary Plans, Cost Estimate and Report	Oct-2008	No	0	NA
Final Preliminary Plans, Cost Estimate and Report	Dec-2008	Yes	10	Dec-2008
Environmental Clearance	Oct-2008	Yes	9	Nov-2008
Utility Clearance	Nov-2008	Yes	9	Nov-2008
Right-of-Way Clearance	Aug-2008	Yes	9	Nov-2008
Approval of IGA	Feb-2009	Yes	14	Apr-2009
Obligation authority of Federal funds	Mar-2009	Yes	15	May-2009
Advertised Date	May-2009	Yes	17	Jul-2009
Final Deployment	Nov-2009	Yes	21	Nov-2009

#### **F. System Maintenance and Operations**

Current staff resources available for ITS operations at the local agency (FTEs)	6
Additional staff resources required for fully utilizing features added by project (FTEs)	0
Estimated current annual ITS operations & maintenance budget	\$679,652
Estimated additional annual operations & maintenance funds required for features added by project	\$0
Estimated DATE from when required additional O&M funds will be available	

**Other comments:**

The majority of the fiber and conduit has been designed as part of the RCN. Reference Tracs No. H6462 11X. Some minor modifications may be necessary but the design is substantially complete.

**G. Systems Engineering Analysis Requirement**

**Commitment to address the federal requirement for Systems Engineering Analysis:**

Agency's intent to follow the process described in the 'V' diagram (See Appendix A of Arterial ITS Plan) during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. The Systems Engineering Analysis will be carried out based on the document Systems Engineering for ITS published by FHWA in January 2007. A guidelines document prepared by FHWA (AZ office) and MAG dated August 2006 is also available (both are posted at the MAG website).